

REMARKS/ARGUMENTS

Claims 1-20 were pending, all of which stand rejected. Claims 1-17, 19 and 20 have been amended and Claims 21-24 have been added. Reconsideration is respectfully requested in light of the amendments.

Claim Rejections – 35 U.S.C. §103

Claims 1-11, 15-17, 19 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,335,288 to Kwan et al. ("Kwan"). As regards, Claim 1, the Examiner referenced Figs. 1D and 3, col. 13, lines 47-67, col. 14, lines 5-10, 30-40 and 50-55, of Kwan.

Claim 1 has been amended by adding inter alia the steps of "reducing the power supplied to the plasma to a second level lower than the first level to create an idle condition plasma, thereby terminating the processing of the wafer" and "cooling the wafer in the presence of the idle condition plasma." These limitations are supported, for example, at page 5, lines 11-14, of the specification. Moreover, the specification indicates that maintaining plasma conditions in the reaction chamber while the wafer is cooled "prevents flaking of deposits on the interior surface of the chamber and thus reduces the damage to the device resulting from particulates that fall onto the wafer" (page 6, lines 28-30).

Kwan contains no teaching suggestion of "cooling the wafer in the presence of the idle condition plasma." Kwan indicates that the wafer may be cooled during processing (col. 14, 33-34), but this is very different from terminating the processing and then cooling the wafer while the plasma is in an idle condition. The above-referenced limitations of amended Claim 1 would not in any way be evident to a person of skill in the art from reading Kwan. There is nothing in Kwan to suggest, for example, that the plasma should not be extinguished once the processing step is completed.

Claims 2-11, 15-17, 19 and 20 depend from Claim 1 and are allowable for at least the same reason. In addition, many of these claims contain limitations which further distinguish over Kwan. For example, Claim 19 recites that "the idle condition plasma is maintained during the step of removing the wafer from the reaction chamber." This limitation is supported at page 6, lines 13-14, of the application. Kwan clearly does not

suggest removing the wafer from the reaction chamber in the presence of an idle condition plasma.

Claims 14 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kwan in view of U.S. Patent No. 6,143,579 to Chang et al. ("Chang"). Chang was cited as teaching "etching a photoresist and the wafer having a gate dielectric layer." Claims 14 and 18 depend from Claim 1, and Chang contains no teaching or suggestion that overcomes the above-cited defects of Kwan as regards Claim 1. Claims 14 and 18 are therefore allowable over the combination of Kwan and Chang.

Claims 12 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kwan in view of U.S. Patent No. 6,268,274, to Wang et al. ("Wang"). Wang was cited as teaching "a plasma process to deposit a phosphorous-doped silicon dioxide layer." Claims 12 and 13 depend from Claim 1, and Wang contains no teaching or suggestion that overcomes the above-cited defects of Kwan as regards Claim 1. Claims 12 and 13 are therefore allowable over the combination of Kwan and Wang.

New Claims 21-24 are supported in the specification at page 6, lines 19-21, and page 7, lines 29-30. Each of these claims depends from and further limits Claim 1 and is therefore allowable for the reasons described above as well as other reasons. For example, Claims 21 and 22 recite "inserting a second wafer into the process chamber while maintaining the idle condition plasma;" and Claim 23 recites that "inserting the wafer is performed before creating the plasma." In contrast, Kwan suggests igniting the plasma after a wafer has been inserted into the chamber (col. 13, line 65).

For the above reasons, Applicants respectfully request allowance of Claims 1-24. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 982-8200, ext. 1.

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Respectfully submitted,


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